

What is claimed is:

1. An FM-CW radar apparatus using a traveling wave antenna as a transmitting antenna, and comprising a means for varying in upward/downward directions the projection angle of a combined beam pattern of a transmitted wave
5 radiated from said traveling wave antenna.

2. An FM-CW radar apparatus as claimed in claim 1, wherein said means for varying the projection angle of the combined beam pattern of said transmitted wave in
10 upward/downward directions is a means for varying the frequency of said transmitted wave.

3. An FM-CW radar apparatus as claimed in claim 2, wherein said means for varying the frequency of said transmitted wave varies said frequency by varying a
15 modulating voltage to be input to a voltage-controlled oscillator that outputs said transmitted wave.

4. An FM-CW radar apparatus as claimed in claim 2, wherein said means for varying the frequency of said transmitted wave includes a means for switching said
20 modulating voltage to be input to said voltage-controlled oscillator that outputs said transmitted wave, wherein the frequency of said transmitted wave is switched between an upper band region and a lower band region by switching said voltage.

5. A two-antenna FM-CW radar apparatus comprising a phase shifter for varying the projection angle of a beam pattern in upward/downward directions by controlling the phase of a radio wave to be transmitted or received, wherein said phase shifter is provided on either a
30 transmitting antenna or a receiving antenna.

6. A single-antenna FM-CW radar apparatus comprising a phase shifter for varying the projection angle of a beam pattern in upward/downward directions by controlling the phase of a radio wave to be transmitted
35 or received, wherein said phase shifter is provided on a transmitting/receiving antenna.